

Simonton Lake  
Elkhart County  
2007 Fish Management Report

Rod A. Edgell  
Assistant Biologist



Fisheries Section  
Indiana Department of Natural Resources  
Division of Fish and Wildlife  
I.G.C.-South, Room W273  
402 W. Washington Street  
Indianapolis, IN 46204

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## EXECUTIVE SUMMARY

- The objective of this survey was to evaluate the current fishery at Simonton Lake and its use, with emphasis on walleye. Simonton Lake is currently being used to evaluate the success of advanced walleye fingerling stockings in natural lakes as outlined in Work Plan 300FW1F10D38617.
- The general survey of Simonton Lake was conducted from June 18 to June 20, 2007. Fish collection effort consisted of 1.18 h of pulsed D.C. night electrofishing with two dippers. Two trap nets were set overnight and one trap net was set for one additional night, making a total of three lifts. Two overnight sets of four experimental gill nets were also used; however two nets were vandalized making a total of 6 lifts.
- A roving-access creel survey was conducted from April 17 to October 24, 2007. A stratified random sampling design was used to select seven days to be sampled every two weeks, including five weekdays and two weekend days.
- A fall evaluation of walleye at Simonton Lake was conducted on September 24 and October 15, 2007. Fish collection effort consisted of 4.26 h of pulsed D.C. night electrofishing with two dippers.
- A total of 553 fish, weighing 199.5 lbs was collected during the general survey. Bluegills were the most abundant fish collected by number (47%), followed by largemouth bass (18%), and redear sunfish (8%). Bluegills of quality size (6 in or greater) comprised 40% of the sample, while bluegills of this size comprised 46% of the sample during the 2005 survey. Of the largemouth bass collected 92% were less than 12 in. A total of 33 walleyes, ranging in total length from 12.0 to 21.2 in was collected.
- During the creel survey, anglers caught an estimated 4,854 fish. Bluegills accounted for 71% of the total number of fish harvested followed by yellow perch and redear sunfish, which accounted for 19% and 3% of the harvest, respectively. During the survey period, anglers fished an estimated total of 9,620 h (32 h/acre). Anglers harvested 115 walleyes (0.38 fish/acre) during the survey, ranking the walleye fourth in angler harvest. The overall catch rate of walleyes was 0.07 fish/h.
- Of the walleyes collected during the fall evaluation, 32% were equal to or greater than 14in.
- The Simonton Lake fishery has changed very little since the 2005 survey. The fishery continues to be dominated by bluegill, largemouth bass, redear sunfish, and yellow perch. Angler harvest has also changed very little since the last creel survey in 1994. Bluegills continue to be the most popular species, while bluegills, yellow perch, and redear continue to dominate the harvest.
- The walleye fishery at Simonton continues to provide angling opportunity, but overall the fishery is considered marginal.

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## INTRODUCTION

Simonton Lake is a 299-acre natural lake located in northern Elkhart County. The lake consists of two basins, which are connected by a shallow channel. The west basin is the larger of the two and has a maximum depth of 24 ft. The east basin is shallow and is dominated by emergent vegetation. Both lake inlets enter into the east basin of the lake and have been extensively channelized and residentially developed. The outlet is located along the west basin and flows into the St. Joseph River. The shore of the west basin is entirely developed while the east basin is approximately 60% developed. A state owned boat ramp is located in the channel connecting the two basins.

Previous general fish surveys were conducted by the Indiana Department of Natural Resources in 1970, 1977, 1983, 1994, and 2005 (Table 1). A creel survey was also conducted in 1994. The objective of this survey was to evaluate the current fishery and its use, with emphasis on walleye. Simonton Lake is currently being used to evaluate the success of advanced walleye fingerling stockings in natural lakes as outlined in Work Plan 300FW1F10D38617 (204137). Advanced walleye fingerlings have been stocked into Simonton Lake off and on since 1988 by the Simonton Lake Sportsmen Club (Table 2). The Division of Fish and Wildlife stocked the lake with 2-in TL fingerlings in 1993 and 1994, but with little success (Koza 2006).

## METHODS

### General Survey

The general survey of Simonton Lake was conducted from June 18 to June 20, 2007. Temperature and oxygen profiles were collected at the deepest point of both basins using a Hydrolab Quanta®. Submersed aquatic plants were sampled on August 1, 2007 according to the Tier II Aquatic Vegetation Survey Protocol (IDNR 2007). A global positioning system device was used to record the location of submersed aquatic vegetation sampling locations.

Fish collection effort consisted of 1.18 h of pulsed D.C. night electrofishing with two dippers. Two trap nets were set overnight and one trap net was set for one additional night, making a total of three lifts. Two overnight sets of four experimental gill nets were also used; however two nets were vandalized making a total of 6 lifts. Sampling locations were based on waypoints collected during the general survey conducted in 2005 (Koza 2006). Total length of all fish was measured to the nearest 0.1 in. District length-weight regression equations were

used to estimate the weight of all fish collected. Five scales per half-inch group were collected from bluegill, largemouth bass, yellow perch, redear sunfish, and walleye for age determination and back-calculated lengths-at-age. Age length keys were also constructed to determine mean length at age. Proportional stock density (PSD) was calculated for bluegill, largemouth bass, and walleye (Anderson and Neumann 1996).

#### Creel Survey

A roving-access creel survey was conducted from April 17 to October 24, 2007. A stratified random sampling design was used to select seven days to be sampled every two weeks, including five weekdays and two weekend days. All holidays were considered weekend days. Each day to be surveyed was divided into two 7.5-hour shifts; shift A ran from 7:30 a.m. to 3:00 p.m., while shift B ran from 3:00 p.m. to 10:30 p.m. Each shift was sampled equally throughout the survey. Four counts of both boat and shore anglers were conducted each shift to estimate fishing pressure. The initial count time was randomly selected and each count following the initial count was then conducted every two hours. Angler interviews were conducted to estimate catch and harvest. Interviews were conducted throughout the shift and as anglers completed their trip. Both complete and incomplete trip interviews were recorded. Information obtained from anglers included hours fished, number in party, county of residence, fishing preference, and the number of each species harvested. The number of largemouth bass and walleye caught and released that were smaller than or greater than the legal size limit were also noted. The total length of each fish harvested was measured to the nearest 0.5 in TL. Lastly, anglers were asked to rate the quality of the fishery, based on species preference, and if they were in support of the walleye stocking program taking place on Simonton Lake.

#### Fall Evaluation

The fall evaluation of walleye at Simonton Lake was conducted on September 24 and October 15, 2007. Water temperature was collected from the West basin. Fish collection effort consisted of 4.26 h of pulsed D.C. night electrofishing with two dippers. Total length was measured to the nearest 0.1 in, while weight was measured to the nearest 0.01 lb.

## RESULTS

### General Survey

On June 18 the water temperature of the west basin was 78.9°F and a dissolved oxygen concentration greater than 3.0 ppm was present down to a depth of 16 ft. The temperature of the smaller east basin was 78.2°F, and the dissolved oxygen concentration was adequate for fish survival throughout the water column. Submersed plants were recorded at a maximum depth of 18 ft, in August of 2007. A total of seven native species and two non-native species were collected. Wild celery was most common (frequency = 36%), followed by Naiad sp, and spiny naiad (frequencies = 35%, and 30%, respectively). Eurasian watermilfoil was collected at only 9% of the sites

A total of 553 fish, weighing 199.5 lbs was collected during this survey. Bluegills were the most abundant fish collected by number (47%), followed by largemouth bass (18%), and redear sunfish (8%). Largemouth bass were the most abundant collected by weight (24%), followed by redear sunfish (21%), and bluegill (17%).

A total of 258 bluegills, ranging in total length from 2.2 to 8.3 in was collected at Simonton Lake. The electrofishing, gill net, and trap net catch rates were 59 fish/h, 3 fish/lift, and 57 fish/lift, respectively. The PSD for bluegill was 36, and no preferred size (8 in) bluegills were collected during electrofishing. Bluegills of quality size (6 in or greater) comprised 40% of the sample, while bluegills of this size comprised 46% of the sample during the 2005 survey (Table 3). Based on an age length key and back calculated lengths at age the majority of bluegills reach 6 in by age 3.

A total of 99 largemouth bass was collected at Simonton Lake. The electrofishing, gill net, and trap net catch rates were 64 fish/h, 4 fish/lift, and 1 fish/lift, respectively. Total length of largemouth collected ranged from 3.7 to 12.9 in, and included no fish over the 14 in minimum size limit. The PSD for largemouth bass during this survey was 7. Of the largemouth bass collected 92% were less than 12 in. This percentage is identical to what was observed during the 2005 survey (Table 3). Based on an age length key and back calculated lengths at age the majority of largemouth bass reach 12 in by ages 4 or 5.

A total of 42 redear sunfish, ranging in total length from 5.0 to 10.1 in was collected. The electrofishing, gill net, and trap net catch rates were 3 fish/h, 1 fish/lift, and 12 fish/lift, respectively. Of the redear collected 57% were equal to or greater than 7 in, and 24% were equal



to or greater than 9 in. Of the redear collected during the 2005 survey 66% were equal to or greater than 7 in, and 13% were equal to or greater than 9 in. Based on an age length key and back calculated lengths at age the majority of redear sunfish reach 7 in by age 3.

A total of 33 walleyes, ranging in total length from 12.0 to 21.2 in was collected. Eleven were not measurable due to turtle consumption, but it was estimated that these fish were within the length range collected. The electrofishing and gill net catch rates were 1 fish/h and 5 fish/lift, respectively. No walleye were caught in trap nets. Eleven walleyes were greater than the 14 in minimum size limit. Based on an age length key and back calculated lengths at age the majority of walleyes reach 14 in by age 3.

Other species worth noting include spotted gar and yellow perch. Of the 29 spotted gar collected the largest was 25.7 in and 38% were greater than or equal to 20 in. A total of 24 yellow perch, ranging in total length from 2.7 to 9.8 in was collected. Of those collected, 29% were equal to or greater than 8 in. Based on an age length key and back calculated lengths at age the majority of yellow perch reach 8 in by age 3. The electrofishing, gill net, and trap net catch rates were 6 fish/h, 3 fish/lift, and 1 fish/lift, respectively.

#### Creel Survey

During the creel survey conducted on Simonton Lake anglers caught an estimated 4,854 fish (Table 4). Angler harvest was greatest during the month of May, followed by September. Boat anglers accounted for 89% of the harvest and all anglers combined harvested 0.5 fish/h (Table 5). Bluegill accounted for 71% of the total number of fish harvested followed by yellow perch and redear sunfish, which accounted for 19% and 3% of the harvest, respectively (Table 4). Bluegill, yellow perch, and redear sunfish accounted for 77%, 11%, and 7% of the harvest during the 1994 creel survey, respectively. During the survey period anglers fished for an estimated total of 9,620 h (32 h/acre) (Table 6). Boat anglers accounted for 72% of all angler effort. The greatest amount of effort was documented during the month of September, followed by July. Average complete trip length was 3.6 h for boat anglers and 1.5 h for shore anglers (Table 7).

An estimated total of 3,425 bluegills were harvested by anglers during the survey period (Table 4). Harvested bluegills ranged in length from 5.0 to 11.5 in and averaged 7.5 in (Table 8). Of the bluegills harvested, 35% were equal to or greater than 8 in. The greatest number of bluegills was harvested during the month of September, followed by May. Bluegills were

harvested at a rate of 0.86 fish/h by those anglers targeting bluegill, with an overall harvest rate of 0.4 fish/h for all anglers combined. On average, medium size natural lakes in Indiana have yielded 0.51 bluegill/h during the past 15 years. This is based on the results of 10 medium sized natural lakes creel surveys conducted since 1995. Only 8% of the bluegills harvested during that time period were less than 6.0 in, while 21% were 8.0 in or larger.

Yellow perch ranked second in harvest with 932 harvested by anglers (Table 4). Harvested yellow perch ranged in length from 5.0 to 12.0 in and averaged 8.0 in (Table 8). The greatest number of yellow perch was harvested during the month of June, followed by July. Yellow Perch were harvested at a rate of 1 fish/h by those anglers targeting yellow perch, with an overall harvest rate of 0.1 fish/h for all anglers combined.

A total of 115 walleyes (0.38 fish/acre) was harvested by anglers during the survey, ranking the species fourth in angler harvest (Table 4). Harvested walleyes ranged in length from 14.0 to 28.5 in and averaged 16.0 in (Table 8). The greatest number of walleyes was harvested during the month of May, followed by April. Walleyes were harvested at a rate of 0.1 fish/h by those anglers targeting walleye. The overall harvest rate of walleyes was 0.02 fish/h for all anglers combined. Walleyes were caught at a rate of 0.34 fish/h by those anglers targeting walleye, with an overall catch rate of 0.07 fish/h for all anglers combined. A total of 137 legal size walleyes was caught and released during the survey, with an additional 283 released that were sub-legal size (Table 9).

A total of 22 largemouth bass was harvested by anglers during the survey (Table 4). Harvested largemouth bass ranged in length from 14.0 to 18.0 in (Table 8). Largemouth bass were caught at a rate of 0.81 fish/h by those anglers targeting largemouth bass, with an overall catch rate of 0.4 fish/h for all anglers combined. A total of 185 legal size largemouth bass was caught and released during the survey, with an additional 3,062 released that were sub-legal size (Table 9). The greatest number of largemouth was caught during the month of May, followed by September.

Other species harvested during the survey included redear sunfish, crappie (black and white combined), rock bass, channel catfish, and miscellaneous sunfish. A total of 134 redear was harvested by anglers during the survey, ranking the species third in angler harvest (Table 4). Harvested redear ranged in length from 6.0 to 11.0 in and averaged 8.5 in (Table 8). A total of 115 crappies was harvested by anglers (Table 4). Harvested crappies ranged in length from 6.0

to 12.5 in and averaged 9.0 in (Table 8). Harvested rock bass ranged in length from 6.0 to 10.0 in, and harvested channel catfish ranged in length from 9.5 to 25.5 in (Table 8).

Bluegills were targeted more by anglers than any other fish during the survey, accounting for 39.9% of the responses (Table 10). Anglers claiming to be fishing for anything made up 26.4% of the responses. Of those anglers targeting anything the majority of their catch was made up of bluegills and largemouth bass. Largemouth bass, walleye, and yellow perch were also among the top five targeted species, accounting for 19.4%, 10.4%, and 2.8% of the responses, respectively. Bluegill made up the majority of the fish targeted during all months, except April when the majority of anglers claimed to be targeting largemouth bass (Table 11).

Anglers from five counties were represented during this survey (Table 12). The majority of anglers interviewed were from Elkhart County, accounting for 82.6% of all anglers. The bordering county of St. Joseph accounted for 14% of the anglers. Anglers from other states accounted for 2.8% of the anglers.

During the interview process anglers were asked to rate the fishing for the species they were targeting that day. Of the 530 anglers who responded 34.7% rated the fishing as good, 38.1% as fair, and 27.2% as poor (Table 13). Of the bluegill anglers who responded, 34.6% rated the fishing as good, 37.4% as fair, and 28.0% as poor. Of the largemouth bass anglers who responded, 37.9% rated the fishing as good, 36.0% as fair, and 26.2% as poor. Anglers who fished for walleye were more likely to describe their fishing trip as good if they caught a walleye (0.25 fish/h) than those who rated their trip as fair (0.02 fish/h) or poor (0.00 fish/h). Of the walleye anglers interviewed, 29.1% rated the fishing as good, 45.5% as fair, and 25.5% as poor.

During the interview, anglers were also asked if they supported the walleye stocking program. Of the 531 anglers who responded, 55.2% stated they did not support the program, 37.5% did support the program, and 7.3% were undecided (Table 14). Of the walleye anglers who responded, 65.5% did support the program, 31.0% did not support the program, and 3.6% were undecided. Of the anglers targeting largemouth bass 44.6% did not support the walleye stocking program. Of the anglers targeting anything 63.6% did not support the walleye program.

#### Fall Evaluation

Water temperature during the September and October sampling was 72 and 61°F, respectively. A total of 31 walleyes, ranging in total length from 10.7 to 20.6 in was collected (Table 15). The electrofishing catch rate was 7 fish/h. Of the walleyes collected, 32% were

equal to or greater than 14in. Walleyes of harvestable size comprised only 13% of the sample during the 2006 fall evaluation. The greatest percentage of walleyes collected of harvestable size occurred during the 2002 fall evaluation (35%), however only 20 fish were collected during that evaluation. The age composition of the fall walleye catch is similar to what has been observed in previous evaluations, walleyes continue to reach 14 in by age 2 or 3 (Table 16).

## DISCUSSION

The Simonton Lake fishery has changed very little since the last survey in 2005. The fishery continues to be dominated by bluegills, largemouth bass, redear sunfish, and yellow perch. Angler harvest has also changed very little since the last creel survey in 1994. Bluegills continue to be the most popular species, while bluegills, yellow perch, and redear continue to dominate the harvest. The bluegill population consists of a good proportion of harvestable size fish and is displaying average growth rates. Very few large individuals were collected during the survey, but were present in the creel. This is likely due to a handful of dedicated bluegill anglers who consistently fish the lake throughout the year, and are capable of targeting bigger fish. While the bluegill fishery is in good shape the largemouth bass fishery continues to be poor. The population has changed very little since the 14 in minimum size limit was implemented in 1984. The population consists mainly of small fish, with very few greater than 14 in. Growth rates are average, fishing pressure is not considered high, and harvest does not appear to be a factor. This situation is not uncommon in Indiana natural lakes, and further investigation of this issue is warranted. The redear and yellow perch populations continue to provide good opportunities for anglers. Both populations contain good percentages of harvestable size fish, and continue to display good to average growth.

The walleye fishery at Simonton continues to provide angling opportunity, but overall the fishery is considered marginal. While the population does contain harvestable size fish, very few large individuals are present. Angler harvest was below the Division of Fish and Wildlife criteria for success of greater than or equal to one walleye harvested per acre. However the catch per hour by targeted walleye anglers was greater than the success criteria of 0.1 fish/h. Walleye stockings continue to be successful with some year to year variation, and growth rates continue to be comparable to the natural lakes average (Burlingame 2007). While the majority of anglers who fish at Simonton prefer bluegill, there is some continued interest in the walleye fishery. However support for this program is questionable. Due to the fact that the walleye fishery is

locally supported, the question asking anglers if they supported the walleye program could have been interpreted incorrectly. The purpose of the question was to identify the percentage of anglers that favored the walleye stocking program. Anglers may have answered based on their involvement in the Sportsman Club and whether or not they financially supported the walleye stockings. The present economic value of walleye trips to Simonton, using a US Fish and Wildlife standard of \$64 per trip in Indiana, was \$19,000. A more detailed analysis of the walleye population at Simonton Lake and an overview of the survival of advanced walleye fingerlings in Indiana natural lakes is scheduled to be completed in 2008.

### RECOMMENDATIONS

- The DFW should continue to encourage the Simonton Lake Sportsman Club to continue the stockings of advanced walleye fingerlings at Simonton Lake. However, support for the program by Simonton Lake anglers should be further investigated. A question to determine the percentage of anglers that are in favor of the walleye stocking program should be included in future creel surveys.
- Gizzard shad that have recently invaded the St Joseph River possess the ability to migrate up Oslo Ditch and into Simonton Lake. The invasion of shad into Simonton Lake could be detrimental to the fishery and the DFW should continue efforts to monitor gizzard shad movements in the St. Joseph River watershed.
- The DFW and the Simonton Lake Association should continue efforts to protect and conserve nearby wetlands and all remaining natural shoreline at Simonton Lake.
- Simonton Lake is a popular lake for recreational boaters and could be limiting enjoyment and use by recreational anglers. It is also suspected that re-suspension of sediments is causing declines in water clarity following weekend boating activities. If lake residents are concerned with the amount of high speed boating, they should explore the possibility of petitioning the DNR to establish boating hours. Establishing high speed boating hours and an ecozone in the east basin to protect emergent vegetation on Simonton Lake could be considered by the lake association and the DFW. Furthermore, the re-facing of deteriorating bulkhead seawalls with glacial stone should also be considered by property owners to reduce wave activity and prevent further erosion. No permit is necessary to re-face a bulkhead seawall with glacial stone, provided that no previous permits were issued for this task in the past.
- Brush pile fish attractors that were constructed and placed into the west basin of the lake in 1984 by the Michigan Bass'n Gals and the Simonton Lake Sportsman Club should be inspected if possible and replacement considered if their condition has deteriorated enough as to make them ineffective.

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Approved by: Stuart Shipman, Regional Supervisor

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Table 1. Abundance of fish collected during general surveys conducted at Simonton Lake from 1965 through 2007.

Species	Number						
	1965	1970	1977	1983	1994	2005	2007
Black bullhead	1		2				
Black crappie	8	12	21	109	14	2	5
Bluegill	238	187	109	374	442	247	258
Bluntnose minnow	1				*		
Bowfin	8	9	16	12	26		
Brook silversides					*		
Brown bullhead		6		13	5		
Central mudminnow						2	
Channel catfish		3		4	2	2	1
Common carp	1	2	5	5	5	4	1
Golden shiner	1	1	4	11	6		
Grass pickerel	1			9	1		
Green sunfish	5	14	8	37	53	1	1
Hybrid sunfish					2	3	1
Johnny darter					1		
Lake chubsucker	12	11	14	13	6	4	
Largemouth bass	78	67	48	136	247	95	99
Longnose gar	9		2	33	5	2	4
Northern pike	6	1	6	19	7		
Pumpkinseed	40	22	22	14	6	8	23
Redear	83	45	40	147	90	71	42
Shortnose gar	1				3		
Smallmouth bass	1	1	2	7	4		3
Spotted gar	4	12	7	31	92	23	29
Walleye				1	16	29	33
Warmouth	51	60	20	77	92	29	20
White crappie		1					
White sucker	1		1	11	12	4	
Yellow bullhead	9	26	39	44	17	6	9
Yellow perch	293	15	30	73	91	90	24
Total	852	495	396	1180	1245	622	553
Electrofishing Effort (h)	6 (AC)	2 (AC)	2.5 (AC)	2	2	1	1.2
# of Gill Net Lifts	28	16	12	13	12	8	6
# of Trap Net Lifts	0	0	0	9	3	3	3
# of Wire Trap Lifts	140	40	0	0	0	0	0

\*Denotes fish collected, but not counted.

Table 2. Date, number, and average length of walleyes stocked at Simonton Lake from 1988 through 2007.

Date Stocked	Number	Average Length (TL)	Comments
October 1988	1,900	6.0	Private Stocking
September 1989	1,868	7.0	Private Stocking
October 1990	2,000	6.0	Private Stocking
October 1991	2,000	6.0	Private Stocking
June 1993	27,500	2.0	IDNR Stocking
June 1994	33,928	1.6	IDNR Stocking
October 1997	2,000	6.5	Private Stocking
October 1998	2,000	6.5	Private Stocking
October 1999	2,000	5.0-8.0	Private Stocking
October 2000	2,000	5.0-8.0	Private Stocking
October 2001	2,000	5.0-8.0	Private Stocking
October 2002	2,000	5.0-8.0	Private Stocking
October 2003	2,000	5.0-8.0	Private Stocking
October 2004	2,000	5.0-8.0	Private Stocking
October 2005	1,500	5.0-8.0	Private Stocking
October 2006	1,220	6.0-8.0	Private Stocking
October 2007	1,095	6.0-8.0	Private Stocking

Table 3. Relative abundance of select size ranges (TL) for bluegills and largemouth bass collected during general surveys at Simonton lake from 1965 through 2007.

Length Range	Bluegills						
	1965	1970	1977	1983	1994	2005	2007
3 - 5.5 in.	152	102	84	314	151	109	144
6 - 6.5 in.	46	32	15	42	81	83	57
7 - 7.5 in.	23	28	3	11	52	25	45
>= 8 in.	1	3	0	0	3	5	1

  

Largemouth Bass							
8 - 9.5 in.	38	29	31	40	95	41	43
10 - 11.5 in.	18	15	5	33	98	41	40
12 - 13.5 in.	3	1	2	5	23	5	8
14 - 17.5 in.	0	0	1	5	0	2	0
>=18 in.	0	0	0	0	1	1	0



Table 4. Monthly angler harvest by species and angler effort at Simonton Lake during 2007.

Species	April	May	June	July	August	September	October	Total
Bluegill	86	734	657	611	424	798	115	3,425
Yellow perch	9	145	201	191	152	175	40	913
Redear sunfish	0	77	28	6	18	3	2	134
Walleye	14	59	10	8	3	11	10	115
Crappie	0	27	39	16	3	30	0	115
Largemouth bass	4	0	7	0	6	5	0	22
Misc. sunfish	0	7	3	6	3	10	0	29
Other	4	17	42	26	9	3	0	101
Total	117	1,066	987	864	618	1,035	167	4,854
Angler Hours	525	1648	1753	1804	1327	1913	650	9,620
Shore Hours	165	211	309	479	446	788	304	2,702
Boat Hours	360	1,437	1,443	1,325	881	1,125	347	6,918

Table 5. Total harvest by boat and shore anglers at Simonton Lake during 2007.

Species	Boat	Shore
Bluegill	3,016	409
Yellow perch	818	95
Redear sunfish	127	7
Walleye	107	8
Crappie	88	27
Largemouth bass	22	0
Misc. sunfish	29	0
Other	91	10
Total	4,298	556

Table 6. Monthly angler hours by fishing method and day type at Simonton Lake during 2007.

Month	Boat Effort		Shore Effort		Total Effort	
	WD	WE	WD	WE	WD	WE
April	150.00	210.00	60.00	105.00	210.00	315.00
May	863.08	573.75	177.69	33.75	1,040.77	607.50
June	889.88	553.50	228.38	81.00	1,118.25	634.50
July	687.27	637.50	336.48	142.50	1,023.75	780.00
August	721.36	160.00	196.02	250.00	917.39	410.00
September	555.00	570.00	337.50	450.00	892.50	1,020.00
October	155.25	191.25	135.00	168.75	290.25	360.00
Total	4,021.84	2,896.00	1,471.07	1,231.00	5,492.91	4,127.00
Grand Total	6,917.84		2,702.07		9,619.91	

WD=Weekday, WE=Weekend

Table 7. Distribution of party and angler numbers as well as the average amount of time for each fish trip by month at Simonton Lake during 2007.

	April	May	June	July	August	September	October	Total
Weekday Parties	11	66	61	43	52	53	19	305
Weekend Parties	15	32	44	40	14	54	27	226
Shore Parties	3	7	10	11	12	32	16	91
Boat Parties	23	91	95	72	54	75	30	440
Total Parties	26	98	105	83	66	107	46	531
Weekday Anglers	15	116	110	74	95	91	31	532
Weekend Anglers	32	62	101	75	34	107	50	461
Shore Anglers	4	9	19	21	35	63	31	182
Boat Anglers	43	169	192	128	94	135	50	811
Total Anglers	47	178	211	149	129	198	81	993
Weekday Average Trip	2.50	3.23	3.40	3.98	3.02	2.97	3.11	3.27
Weekend Average Trip	3.85	3.59	3.45	3.63	3.47	3.48	2.74	3.47
Shore Average Trip	1.38	0.92	1.18	1.50	1.96	1.53	1.70	1.46
Boat Average Trip	3.48	3.52	3.60	3.95	3.27	3.52	3.11	3.55
Total Average Trip	3.31	3.35	3.42	3.80	3.09	3.21	2.88	3.35

Table 8. Length frequency and mean length of fish species harvested from Simonton Lake during 2007.

Inches	Bluegill	Crappie	Redear sunfish	Yellow perch	Largemouth bass	Walleye	Channel catfish	Rock bass
5.0				3				
5.5				3				
6.0	2	2	1	18				2
6.5	27	0	1	23				3
7.0	104	3	6	50				8
7.5	190	4	7	42				4
8.0	268	11	11	59				8
8.5	216	3	6	39				2
9.0	183	3	7	37				
9.5	93	1	4	21			1	1
10.0	71	5	13	13				1
10.5	30	1	2	7				
11.0	28	3	1	4				
11.5	18	2		1				
12.0	5	2		3				
12.5	1	1						
13.0							1	
13.5								
14.0					2	7		
14.5						13	1	
15.0						7		
15.5					2	4		
16.0						3	1	
16.5					1	4		
17.0						3		
17.5					1	1		
18.0					1			
18.5						2		
19.0						1		
19.5								
20.0								
20.5								
21.0								
21.5								
22.0								
22.5								
23.0								
23.5						1		
24.0								
24.5								
25.0								
25.5							1	
26.0								
26.5								
27.0								
27.5								
28.0								
28.5						1		
Mean Length	7.5	9	8.5	8	16	16	15.5	7.5

Table 9. Monthly angler catch and release of walleye and largemouth bass based on a 14 inch minimum size limit at Simonton Lake during 2007.

Species	April	May	June	July	August	September	October	Total
Legal walleye	0	5	7	119	0	3	3	137
sub-legal walleye	7	63	87	70	13	31	12	283
Total	7	68	94	189	13	34	15	420
Legal largemouth bass	5	32	16	64	22	41	5	185
Sub-legal largemouth bass	295	971	488	342	341	481	144	3,062
Total	300	1,003	504	406	363	522	149	3,247

Table 10. Number of anglers, interview hours, harvest, and catch and release by preference at Simonton Lake during 2007.

Fishing preference	Anglers	Hours	Harvest				Released	
			BLG	YEP	RES	WAE	WAE	LMB
Bluegill	351	1,150.25	985	134	42	2	46	234
Anything	321	865.25	132	28	8	3	13	217
Largemouth bass	187	637.50	54	23	3	0	15	513
Walleye	94	343.25	46	34	1	35	81	203
Yellow perch	31	92.00	17	95	0	4	9	31
Crappie	9	37.25	4	6	0	3	2	29

Table 11. Monthly angler preference at Simonton Lake during 2007.

Species	April	May	June	July	August	September	October	Total
Bluegill	12	54	65	76	45	72	27	351
Anything	12	58	59	39	61	66	26	321
Largemouth bass	14	37	52	20	16	37	11	187
Walleye	9	18	25	11	5	16	10	94
Yellow perch	0	5	7	3	2	7	7	31
Crappie	0	6	3	0	0	0	0	9
Total	47	178	211	149	129	198	81	993

Table 12. Residency of anglers fishing at Simonton Lake during 2007.

County	Code	# of Interviews	Percentage
Elkhart	20	438	82.6
St. Joseph	71	74	14.0
Michigan	93	12	2.3
Other States	95	3	0.6
Kosciusko	43	1	0.2
Lagrange	44	1	0.2
Rush	70	1	0.2
Total		530	100.0

Table 13. Angler response when asked to rate the fishing today for their targeted species at Simonton Lake during 2007.

Species	Good	Fair	Poor	# of responses
Bluegill	73	79	59	211
Crappie	3	2	1	6
Yellow perch	5	8	2	15
Largemouth bass	39	37	27	103
Walleye	16	25	14	55
Anything	48	51	41	140
Total	184	202	144	530

Table 14. Angler response when asked if they supported the walleye stocking program at Simonton Lake during 2007.

Species	Yes	No	Undecided	# of responses
Bluegill	68	132	12	212
Crappie	3	3	0	6
Yellow perch	8	6	1	15
Largemouth bass	49	46	8	103
Walleye	36	17	2	55
Anything	35	89	16	140
Total	199	293	39	531

Table 15. Length frequency, sampling effort, catch rate, and proportional stock density (PSD) of walleyes collected during fall electrofishing (EF) from Simonton Lake during 2002 through 2007.

Length Group	2002	2003	2004	2005	2006	2007
5.0			3			
5.5			1			
6.0						
6.5			5			
7.0			1			
7.5						
8.0			2			
8.5			1			
9.0						
9.5			1			
10.0		4	2			
10.5	3	2			1	3
11.0	4	9	8	9	9	5
11.5	2	5	4	4	14	2
12.0	2	3		12	10	1
12.5		2	1	4	4	1
13.0	2	2		1	1	2
13.5			3	5	1	7
14.0	3			2	3	3
14.5	4		1	2	1	2
15.0		3		3	1	
15.5						
16.0						1
16.5		1				1
17.0				1		
17.5				1		1
18.0						
18.5			1	1		
19.0						
19.5						
20.0						1
20.5						1
21.0				1		
21.5						
22.0						
22.5						
23.0						
23.5						
24.0						
24.5						
25.0						
25.5						
26.0					1	
26.5						
27.0						
27.5						
28.0						
28.5						
29.0				1		
Total	20	31	34	47	46	31
EF Effort (h)	4.12	3.89	4.5	3.7	4.05	4.26
Catch Rate (fish/h)	4.9	8.0	7.6	12.7	11.4	7.3
PSD	32	23	21	15	9	16

Table 16. Age composition and mean total length (in) of walleyes captured during fall evaluations at Simonton Lake from 2002 through 2007 (Burlingame 2007).

Age	2002	2003	2004	2005	2006	2007
0	0	0	13(6.5)	0		1(10.8)
1	15(11.5)	26(10.9)	15(11.0)	40(11.5)	47(11.6)	9(11.3)
2	24(14.2)	7(12.7)	11(13.0)	27(13.3)	16(13.8)	12(13.5)
3	12(15.2)	6(15.2)	8(13.6)	21(14.6)	6(15.4)	4(14.9)
4	5(15.7)	3(17.0)	3(14.5)	1(16.0)	2(16.3)	1(20.8)
5	2(18.5)	2(18.5)	4(17.3)	1(16.0)	0	2(15.8)
6	0	0	1(19.5)	1(17.5)	0	2(18.5)
7	0	1(23.0)	2(19.8)	2(17.8)	0	0
8	0	0	0	1(29.0)	1(26.0)	0

## Appendix



**LAKE SURVEY REPORT**

Type of Survey
<input type="checkbox"/> Initial Survey <input checked="" type="checkbox"/> Re-Survey

Lake Name	County	Date of survey (Month, day, year)
Simonton Lake	Elkhart	6/18/2007
Biologist's name	Date of survey (Month, day, year)	
Rod Edgell	6/20/2007	

LOCATION		
Quadrangle Name	Range	Section
Elkhart	5E	8,9,15,16,17
Township Name	Nearest Town	
38N	Elkhart, IN	

ACCESSIBILITY					
State owned public access site		Privately owned public access site		Other access site	
Located on south side, off Lake Dr.					
Surface acres	Maximum depth	Average depth	Acre feet	Water level	Extreme fluctuations
299	24 feet	5.5 feet	1,555	772.19 MSL	0.5-1.05 feet yearly
Location of benchmark					
At Johnson Marine on IN 19 on west shore of lake					

INLETS		
Name	Location	Origin
Unnamed	East shore	Drainage
Unnamed	East shore	Drainage

OUTLETS			
Name		Location	
Osolo Township Ditch		South into St. Joseph River	
Water level control			
None			
POOL	ELEVATION (Feet MSL)	ACRES	Bottom type
TOP OF DAM			<input type="checkbox"/> Bolder
TOP OF FLOOD CONTROL POOL			<input type="checkbox"/> Gravel
TOP OF CONSERVATION POOL			<input checked="" type="checkbox"/> Sand
TOP OF MINIMUM POOL			<input type="checkbox"/> Muck
STREAMBED			<input type="checkbox"/> Clay
			<input checked="" type="checkbox"/> Marl

Watershed use
Farming, City of Elkhart, residential
Development of shoreline
The shoreline of Big Simonton (West Basin) is completely developed. Approximately 60% of the East Basin is developed.
Previous surveys and investigations
Mapping, USGS, 1955. Fish Surveys, IDNR, 1965, 1970, 1977, 1983, 1994, and 2005.
Largemouth Bass Surveys, IDNR, 1984, 1985, 1986, 1987, 1988.

SAMPLING EFFORT					
ELECTROFISHING	Day hours		Night Hours		Total Hours
			1.18		1.18
TRAP NETS	Number of Traps		Number of Lifts		Total Lifts
	1/1		1/2		3
GILL NETS	Number of Nets		Number of Lifts		Total Lifts
	3		2		6
ROTENONE	Gallons	ppm	Acre-feet Treated	SHORELINE SEINING	Number of 100 ft Seine Hauls

PHYSICAL AND CHEMICAL CHARACTERISTICS					
Color		Turbidity (Secchi Disk)			Air Temperature
Light Green		5	Feet	6	Inches
Water Chemistri GPS Coordinates		N			W

WATER QUALITY PARAMETERS															
DEPTH (Feet)	Degrees ( F)	D.O.	SpC	pH	TDS	D.O. %	Turb.	DEPTH	Degrees ( F)	D.O.	SpC	pH	TDS	D.O. %	Turb.
SURFACE	78.9	6.8	0.398	8.2	0.3	87.7	48.6	52							
2	78.9	6.7						54							
4	78.9	6.7						56							
6	78.9	6.6						58							
8	78.9	6.6						60							
10	78.6	6.3						62							
12	77.9	6.2						64							
14	76.6	6.2						66							
16	73.7	4.6						68							
18	72.3	2.1						70							
20								72							
22								74							
24								76							
26								78							
28								80							
30								82							
32								84							
34								86							
36								88							
38								90							
40								92							
42								94							
44								96							
46								98							
48								100							
50															
COMMENTS															
C=(F-32)*0.5555															
Water Chemistry for West Basin.															

SAMPLING EFFORT					
ELECTROFISHING	Day hours		Night Hours		Total Hours
TRAP NETS	Number of Traps		Number of Lifts		Total Lifts
GILL NETS	Number of Nets		Number of Lifts		Total Lifts
ROTENONE	Gallons	ppm	Acre-feet Treated	SHORELINE SEINING	Number of 100 ft Seine Hauls

PHYSICAL AND CHEMICAL CHARACTERISTICS					
Color	Turbidity (Secchi Disk)			Air Temperature	76 F
Light Green	5	Feet	0	Inches	Water temperature 78.2 F
Water Chemistri GPS Coordinates		N	W		

WATER QUALITY PARAMETERS															
DEPTH (Feet)	Degrees ( F)	D.O.	SpC	pH	TDS	D.O. %	Turb.	DEPTH	Degrees ( F)	D.O.	SpC	pH	TDS	D.O. %	Turb.
SURFACE	78.2	6.2	0.39	8.1	0.3	79.2	37.4	52							
2	78.2	6						54							
4	77.9	6.1						56							
6	77.5	6.2						58							
8	77.1	6.3						60							
10								62							
12								64							
14								66							
16								68							
18								70							
20								72							
22								74							
24								76							
26								78							
28								80							
30								82							
32								84							
34								86							
36								88							
38								90							
40								92							
42								94							
44								96							
46								98							
48								100							
50															
COMMENTS															
Water Chemistry for East Basin.															

## Occurrence and Abundance of Submersed Aquatic Plants - Overall

Lake: Simonton	Secchi(ft): 6.0	SE Mean species / site: 0.15
Date: 8/1/2007	Littoral sites with plants: 54	Mean natives / site: 1.42
Littoral Depth (ft): 18.0	Number of species: 9	SE Mean natives / site: 0.13
Littoral Sites: 67	Maximum species / site: 4	Species diversity: 0.83
Total Sites: 69	Mean species / site: 1.58	Native diversity: 0.80

Species	Frequency of	Score Frequency				Dominance
	Occurrence	0	1	3	5	
Wild celery	36.2	63.8	20.3	11.6	4.3	15.4
Naiad sp.	34.8	65.2	29.0	4.3	1.4	9.9
Spiny naiad	30.4	69.6	13.0	11.6	5.8	15.4
Chara sp.	20.3	79.7	17.4	1.4	1.4	5.8
Eurasian watermilfoil	13.0	87.0	10.1	2.9	0.0	3.8
Richardson's pondweed	10.1	89.9	8.7	1.4	0.0	2.6
Sago pondweed	8.7	91.3	2.9	0.0	5.8	6.4
Curly-leaf pondweed	2.9	97.1	2.9	0.0	0.0	0.6
Coontail	1.4	98.6	0.0	1.4	0.0	0.9
Filamentous Algae	2.9					
Other species noted:						

### Occurrence and Abundance of Submersed Aquatic Plants - 0 to 5 ft.

Lake: Simonton	Secchi(ft): 6.0	SE Mean species / site: 0.29
Date: 8/1/2007	Littoral sites with plants: 16	Mean natives / site: 1.48
Littoral Depth (ft): 18.0	Number of species: 9	SE Mean natives / site: 0.27
Littoral Sites: 23	Maximum species / site: 4	Species diversity: 0.83
Total Sites: 23	Mean species / site: 1.61	Native diversity: 0.80

Species	Frequency of	Score Frequency				Dominance
	Occurrence	0	1	3	5	
Wild celery	39.1	60.9	30.4	4.3	4.3	13.0
Naiad sp.	39.1	60.9	30.4	8.7	0.0	11.3
Chara sp.	26.1	73.9	21.7	4.3	0.0	7.0
Spiny naiad	17.4	82.6	8.7	0.0	8.7	10.4
Richardson's pondweed	13.0	87.0	8.7	4.3	0.0	4.3
Sago pondweed	8.7	91.3	4.3	0.0	4.3	5.2
Eurasian watermilfoil	8.7	91.3	4.3	4.3	0.0	3.5
Coontail	4.3	95.7	0.0	4.3	0.0	2.6
Curly-leaf pondweed	4.3	95.7	4.3	0.0	0.0	0.9
Filamentous Algae	4.3					

Other species noted:

### Occurrence and Abundance of Submersed Aquatic Plants - 5 to 10 ft.

Lake: Simonton	Secchi(ft): 6.0	SE Mean species / site: 0.26
Date: 8/1/2007	Littoral sites with plants: 20	Mean natives / site: 1.76
Littoral Depth (ft): 18.0	Number of species: 8	SE Mean natives / site: 0.19
Littoral Sites: 21	Maximum species / site: 4	Species diversity: 0.84
Total Sites: 21	Mean species / site: 2.05	Native diversity: 0.80

Species	Frequency of Occurrence	Score Frequency				Dominance
		0	1	3	5	
Wild celery	42.9	57.1	14.3	19.0	9.5	23.8
Chara sp.	38.1	61.9	33.3	0.0	4.8	11.4
Naiad sp.	38.1	61.9	38.1	0.0	0.0	7.6
Spiny naiad	33.3	66.7	9.5	19.0	4.8	18.1
Eurasian watermilfoil	23.8	76.2	19.0	4.8	0.0	6.7
Richardson's pondweed	19.0	81.0	19.0	0.0	0.0	3.8
Sago pondweed	4.8	95.2	0.0	0.0	4.8	4.8
Curly-leaf pondweed	4.8	95.2	4.8	0.0	0.0	1.0
Filamentous Algae	4.8					

Other species noted:

### Occurrence and Abundance of Submersed Aquatic Plants - 10 to 15 ft.

Lake: Simonton	Secchi(ft): 6.0	SE Mean species / site: 0.23
Date: 8/1/2007	Littoral sites with plants: 15	Mean natives / site: 1.33
Littoral Depth (ft): 18.0	Number of species: 5	SE Mean natives / site: 0.21
Littoral Sites: 18	Maximum species / site: 3	Species diversity: 0.74
Total Sites: 18	Mean species / site: 1.44	Native diversity: 0.70

Species	Frequency of Occurrence	Score Frequency				Dominance
		0	1	3	5	
Spiny naiad	55.6	44.4	27.8	22.2	5.6	24.4
Wild celery	33.3	66.7	16.7	16.7	0.0	13.3
Naiad sp.	27.8	72.2	16.7	5.6	5.6	12.2
Sago pondweed	16.7	83.3	5.6	0.0	11.1	12.2
Eurasian watermilfoil	11.1	88.9	11.1	0.0	0.0	2.2
Filamentous Algae	0.0					

Other species noted:

### Occurrence and Abundance of Submersed Aquatic Plants - 15 to 20 ft.

Lake: Simonton	Secchi(ft): 6.0	SE Mean species / site: 0.20
Date: 8/1/2007	Littoral sites with plants: 3	Mean natives / site: 0.43
Littoral Depth (ft): 18.0	Number of species: 2	SE Mean natives / site: 0.20
Littoral Sites: 5	Maximum species / site: 1	Species diversity: 0.44
Total Sites: 7	Mean species / site: 0.43	Native diversity: 0.44

Species	Frequency of Occurrence	Score Frequency				Dominance
		0	1	3	5	
Naiad sp.	28.6	71.4	28.6	0.0	0.0	5.7
Wild celery	14.3	85.7	14.3	0.0	0.0	2.9
Filamentous Algae	0.0					

Other species noted:

SPECIES AND RELATIVE ABUNDANCE OF FISHES COLLECTED BY NUMBER AND WEIGHT						
*COMMON NAME OF FISH	NUMBER	PERCENT	LENGTH RANGE (inches)		WEIGHT (pounds)	PERCENT
			minimum	maximum		
Bluegill	258	46.7	2.2	8.3	33.37	16.7
Largemouth bass	99	17.9	3.7	12.9	46.92	23.5
Redear sunfish	42	7.6	5.0	10.1	42.00	21.1
Walleye	33	6.0	12.0	21.2	19.38	9.7
Spotted gar	29	5.2	15.5	25.7	26.78	13.4
Yellow perch	24	4.3	2.7	9.8	4.14	2.1
Pumpkinseed	23	4.2	4.2	6.9	3.78	1.9
Warmouth	20	3.6	5.3	7.6	5.10	2.6
Yellow bullhead	9	1.6	7.8	11.6	4.48	2.2
Black crappie	5	0.9	7.6	9.4	1.44	0.7
Longnose gar	4	0.7	22.7	27.9	4.27	2.1
Smallmouth Bass	3	0.5	5.2	8.9	0.00	0.0
Channel Catfish	1	0.2	22.6	22.6	3.94	2.0
Common carp	1	0.2	19.5	19.5	3.61	1.8
Green sunfish	1	0.2	6.9	6.9	0.28	0.1
Hybrid sunfish	1	0.2	7.2	7.2	0.00	0.0
Total ( Species)	553	100.0			199.50	100.0

\*Common names of fishes recognized by the American Fisheries Society.



NUMBER, PERCENTAGE, WEIGHT, AND AGE OF BLUEGILL									
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH
1.0	0	0.0	0.00		19.0	0	0.0	0.00	
1.5	0	0.0	0.00		19.5	0	0.0	0.00	
2.0	8	3.1	0.04	1	20.0	0	0.0	0.00	
2.5	3	1.2	0.03	1, 2	20.5	0	0.0	0.00	
3.0	15	5.8	0.29	2	21.0	0	0.0	0.00	
3.5	22	8.5	0.67	2	21.5	0	0.0	0.00	
4.0	30	11.6	1.38	2	22.0	0	0.0	0.00	
4.5	24	9.3	1.59	2, 3	22.5	0	0.0	0.00	
5.0	24	9.3	2.19	2, 3	23.0	0	0.0	0.00	
5.5	29	11.2	3.55	2, 3	23.5	0	0.0	0.00	
6.0	26	10.1	4.16	2, 3, 4	24.0	0	0.0	0.00	
6.5	31	12.0	6.33	3, 4	24.5	0	0.0	0.00	
7.0	25	9.7	6.41	3, 4, 5	25.0	0	0.0	0.00	
7.5	20	7.8	6.34	4, 5	25.5	0	0.0	0.00	
8.0	1	0.4	0.39		26.0	0	0.0	0.00	
8.5	0	0.0	0.00		26.5	0	0.0	0.00	
9.0	0	0.0	0.00		27.0	0	0.0	0.00	
9.5	0	0.0	0.00		27.5	0	0.0	0.00	
10.0	0	0.0	0.00		28.0	0	0.0	0.00	
10.5	0	0.0	0.00		28.5	0	0.0	0.00	
11.0	0	0.0	0.00		29.0	0	0.0	0.00	
11.5	0	0.0	0.00		29.5	0	0.0	0.00	
12.0	0	0.0	0.00		30.0	0	0.0	0.00	
12.5	0	0.0	0.00		TOTAL	258	100.0	33.37	
13.0	0	0.0	0.00						
13.5	0	0.0	0.00						
14.0	0	0.0	0.00						
14.5	0	0.0	0.00						
15.0	0	0.0	0.00						
15.5	0	0.0	0.00						
16.0	0	0.0	0.00						
16.5	0	0.0	0.00						
17.0	0	0.0	0.00						
17.5	0	0.0	0.00						
18.0	0	0.0	0.00						
18.5	0	0.0	0.00						
ELECTROFISHING CATCH (#/hr)		59		GILL NET CATCH (#/lift)		3		TRAP NET CATCH (#/lift)	
								57	

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF LARGEMOUTH BASS									
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH
1.0	0	0.0	0.00		19.0	0	0.0	0.00	
1.5	0	0.0	0.00		19.5	0	0.0	0.00	
2.0	0	0.0	0.00		20.0	0	0.0	0.00	
2.5	0	0.0	0.00		20.5	0	0.0	0.00	
3.0	0	0.0	0.00		21.0	0	0.0	0.00	
3.5	1	1.0	0.02	1	21.5	0	0.0	0.00	
4.0	1	1.0	0.03	1	22.0	0	0.0	0.00	
4.5	0	0.0	0.00		22.5	0	0.0	0.00	
5.0	0	0.0	0.00		23.0	0	0.0	0.00	
5.5	0	0.0	0.00		23.5	0	0.0	0.00	
6.0	0	0.0	0.00		24.0	0	0.0	0.00	
6.5	0	0.0	0.00		24.5	0	0.0	0.00	
7.0	3	3.0	0.49	2, 3	25.0	0	0.0	0.00	
7.5	3	3.0	0.60	3	25.5	0	0.0	0.00	
8.0	7	7.1	1.72	2, 3	26.0	0	0.0	0.00	
8.5	18	18.2	5.32	2, 3	26.5	0	0.0	0.00	
9.0	14	14.1	4.93	2, 3	27.0	0	0.0	0.00	
9.5	4	4.0	1.66	2, 3	27.5	0	0.0	0.00	
10.0	6	6.1	2.92	3, 4	28.0	0	0.0	0.00	
10.5	10	10.1	5.66	3	28.5	0	0.0	0.00	
11.0	14	14.1	9.14	3, 4	29.0	0	0.0	0.00	
11.5	10	10.1	7.49	4	29.5	0	0.0	0.00	
12.0	7	7.1	5.98	3, 4, 5	30.0	0	0.0	0.00	
12.5	1	1.0	0.97	5	TOTAL	99	100.0	46.92	
13.0	0	0.0	0.00						
13.5	0	0.0	0.00						
14.0	0	0.0	0.00						
14.5	0	0.0	0.00						
15.0	0	0.0	0.00						
15.5	0	0.0	0.00						
16.0	0	0.0	0.00						
16.5	0	0.0	0.00						
17.0	0	0.0	0.00						
17.5	0	0.0	0.00						
18.0	0	0.0	0.00						
18.5	0	0.0	0.00						
ELECTROFISHING CATCH (#/hr)		64		GILL NET CATCH (#/lift)		4		TRAP NET CATCH (#/lift)	
								1	

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF WALLEYE											
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH		
1.0	0	0.0	0.00		19.0	1	4.5	0.00	4		
1.5	0	0.0	0.00		19.5	0	0.0	0.00			
2.0	0	0.0	0.00		20.0	0	0.0	0.00			
2.5	0	0.0	0.00		20.5	0	0.0	0.00			
3.0	0	0.0	0.00		21.0	1	4.5	3.05	4		
3.5	0	0.0	0.00		21.5	0	0.0	0.00			
4.0	0	0.0	0.00		22.0	0	0.0	0.00			
4.5	0	0.0	0.00		22.5	0	0.0	0.00			
5.0	0	0.0	0.00		23.0	0	0.0	0.00			
5.5	0	0.0	0.00		23.5	0	0.0	0.00			
6.0	0	0.0	0.00		24.0	0	0.0	0.00			
6.5	0	0.0	0.00		24.5	0	0.0	0.00			
7.0	0	0.0	0.00		25.0	0	0.0	0.00			
7.5	0	0.0	0.00		25.5	0	0.0	0.00			
8.0	0	0.0	0.00		26.0	0	0.0	0.00			
8.5	0	0.0	0.00		26.5	0	0.0	0.00			
9.0	0	0.0	0.00		27.0	0	0.0	0.00			
9.5	0	0.0	0.00		27.5	0	0.0	0.00			
10.0	0	0.0	0.00		28.0	0	0.0	0.00			
10.5	0	0.0	0.00		28.5	0	0.0	0.00			
11.0	0	0.0	0.00		29.0	0	0.0	0.00			
11.5	0	0.0	0.00		29.5	0	0.0	0.00			
12.0	3	13.6	1.46	2	30.0	0	0.0	0.00			
12.5	3	13.6	1.80	2, 3	TOTAL	22	100.0	19.38			
13.0	3	13.6	2.04	2, 3							
13.5	2	9.1	1.47	2, 3							
14.0	0	0.0	0.00								
14.5	4	18.2	2.78	3, 4							
15.0	1	4.5	1.05	3							
15.5	1	4.5	1.15	3							
16.0	1	4.5	1.18	3							
16.5	0	0.0	0.00								
17.0	1	4.5	1.50	3							
17.5	0	0.0	0.00								
18.0	0	0.0	0.00								
18.5	1	4.5	1.90	4							
An additional 11 walleye were collected, but were not measurable. Catch rates were based on a total catch of 33 fish.											
ELECTROFISHING CATCH (#/hr)		1		GILL NET CATCH (#/lift)		5		TRAP NET CATCH (#/lift)		0	

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF REDEAR SUNFISH									
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH
1.0	0	0.0	0.00		19.0	0	0.0	0.00	
1.5	0	0.0	0.00		19.5	0	0.0	0.00	
2.0	0	0.0	0.00		20.0	0	0.0	0.00	
2.5	0	0.0	0.00		20.5	0	0.0	0.00	
3.0	0	0.0	0.00		21.0	0	0.0	0.00	
3.5	0	0.0	0.00		21.5	0	0.0	0.00	
4.0	0	0.0	0.00		22.0	0	0.0	0.00	
4.5	0	0.0	0.00		22.5	0	0.0	0.00	
5.0	2	4.8	0.18	2, 3	23.0	0	0.0	0.00	
5.5	4	9.5	0.49	2	23.5	0	0.0	0.00	
6.0	4	9.5	0.64	2, 3	24.0	0	0.0	0.00	
6.5	8	19.0	1.62	2	24.5	0	0.0	0.00	
7.0	3	7.1	0.76	2, 3	25.0	0	0.0	0.00	
7.5	5	11.9	1.56	3, 4	25.5	0	0.0	0.00	
8.0	5	11.9	1.89	3, 5	26.0	0	0.0	0.00	
8.5	1	2.4	0.45	3	26.5	0	0.0	0.00	
9.0	3	7.1	1.62	3, 4, 5	27.0	0	0.0	0.00	
9.5	6	14.3	3.81	4, 5	27.5	0	0.0	0.00	
10.0	1	2.4	0.74	5	28.0	0	0.0	0.00	
10.5	0	0.0	0.00		28.5	0	0.0	0.00	
11.0	0	0.0	0.00		29.0	0	0.0	0.00	
11.5	0	0.0	0.00		29.5	0	0.0	0.00	
12.0	0	0.0	0.00		30.0	0	0.0	0.00	
12.5	0	0.0	0.00		TOTAL	42	100.0	42.00	
13.0	0	0.0	0.00						
13.5	0	0.0	0.00						
14.0	0	0.0	0.00						
14.5	0	0.0	0.00						
15.0	0	0.0	0.00						
15.5	0	0.0	0.00						
16.0	0	0.0	0.00						
16.5	0	0.0	0.00						
17.0	0	0.0	0.00						
17.5	0	0.0	0.00						
18.0	0	0.0	0.00						
18.5	0	0.0	0.00						
ELECTROFISHING CATCH (#/hr)		3		GILL NET CATCH (#/lift)	1		TRAP NET CATCH (#/lift)	12	

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF YELLOW PERCH									
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	WEIGHT (pounds)	AGE OF FISH
1.0	0	0.0	0.00		19.0	0	0.0	0.00	
1.5	0	0.0	0.00		19.5	0	0.0	0.00	
2.0	0	0.0	0.00		20.0	0	0.0	0.00	
2.5	1	4.2	0.01	1	20.5	0	0.0	0.00	
3.0	0	0.0	0.00		21.0	0	0.0	0.00	
3.5	1	4.2	0.02	1	21.5	0	0.0	0.00	
4.0	2	8.3	0.05	1, 2	22.0	0	0.0	0.00	
4.5	0	0.0	0.00		22.5	0	0.0	0.00	
5.0	0	0.0	0.00		23.0	0	0.0	0.00	
5.5	0	0.0	0.00		23.5	0	0.0	0.00	
6.0	4	16.7	0.40	2	24.0	0	0.0	0.00	
6.5	3	12.5	0.39	2	24.5	0	0.0	0.00	
7.0	4	16.7	0.66	2, 3	25.0	0	0.0	0.00	
7.5	2	8.3	0.41	2, 3	25.5	0	0.0	0.00	
8.0	3	12.5	0.76	3	26.0	0	0.0	0.00	
8.5	2	8.3	0.62	3, 4	26.5	0	0.0	0.00	
9.0	1	4.2	0.37	5	27.0	0	0.0	0.00	
9.5	1	4.2	0.44	5	27.5	0	0.0	0.00	
10.0	0	0.0	0.00		28.0	0	0.0	0.00	
10.5	0	0.0	0.00		28.5	0	0.0	0.00	
11.0	0	0.0	0.00		29.0	0	0.0	0.00	
11.5	0	0.0	0.00		29.5	0	0.0	0.00	
12.0	0	0.0	0.00		30.0	0	0.0	0.00	
12.5	0	0.0	0.00		TOTAL	24	100.0	4.14	
13.0	0	0.0	0.00						
13.5	0	0.0	0.00						
14.0	0	0.0	0.00						
14.5	0	0.0	0.00						
15.0	0	0.0	0.00						
15.5	0	0.0	0.00						
16.0	0	0.0	0.00						
16.5	0	0.0	0.00						
17.0	0	0.0	0.00						
17.5	0	0.0	0.00						
18.0	0	0.0	0.00						
18.5	0	0.0	0.00						

ELECTROFISHING CATCH (#/hr)	6	GILL NET CATCH (#/lift)	3	TRAP NET CATCH (#/lift)	1
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Back-calculated lengths-at-age for bluegills captured at Simonton Lake, Elkhart County, Indiana in June 2007.

Year Class	# Aged	Age				
		1	2	3	4	5
2006	7	1.7				
	SD	0.1				
2005	25	1.6	3.2			
	SD	0.2	0.6			
2004	11	1.5	2.8	5.1		
	SD	0.2	0.4	0.8		
2003	7	1.3	2.5	4.2	6.1	
	SD	0.2	0.4	1.0	0.9	
2002	4	1.4	2.6	4.2	6.2	7.1
	SD	0.2	0.3	0.6	0.5	0.2
Mean*		1.5	2.8	4.5	6.1	7.1
SD		0.2	0.4	0.8	0.7	0.2

\*Does not include age groups with less than three samples.

Age-length key for bluegills captured at Simonton Lake, Elkhart County, Indiana in June 2007.

Length Group	# in sample	# (age) in subsample	Age				
			1	2	3	4	5
2.0	8	5(1)	8				
2.5	3	2(1),1(2)	2	1			
3.0	15	5(2)		15			
3.5	22	5(2)		22			
4.0	30	5(2)		30			
4.5	24	4(2),1(3)		19	5		
5.0	24	3(2),1(3)		18	6		
5.5	29	1(2),2(3)		10	19		
6.0	26	1(2),2(3),2(4)		5	10	10	
6.5	31	3(3),2(4)			19	12	
7.0	25	2(3),1(4),1(5)			13	6	6
7.5	20	2(4),3(5)				8	12
8.0	1						
Mean TL			2.4	4.5	6.2	6.9	7.6
SE			0.1	0.1	0.1	0.1	0.1

Back-calculated lengths-at-age for largemouth bass captured at  
Simonton Lake, Elkhart County, Indiana in June 2007.

Year Class	# Aged	Age				
		1	2	3	4	5
2006	2	2.9				
	SD	0.2				
2005	17	4.1	7.3			
	SD	1.2	1.0			
2004	20	5.0	8.5	10.6		
	SD	5.7	6.8	7.2		
2003	10	3.5	7.3	9.6	10.8	
	SD	1.0	0.6	0.8	0.6	
2002	2	3.4	7.3	9.1	10.8	11.9
	SD	0.2	0.1	0.0	0.1	0.4
Mean*		4.2	7.7	10.1	10.8	
SD		2.6	2.8	4.0	0.6	

\*Does not include age groups with less than three samples.

Age-length key for largemouth bass captured at Simonton Lake, Elkhart County, Indiana in June 2007.

Length Group	# in sample	# (age) in subsample	Age				
			1	2	3	4	5
3.5	1	1(1)	1				
4.0	1	1(1)	1				
4.5							
5.0							
5.5							
6.0							
6.5							
7.0	3	2(2),1(3)		2	1		
7.5	3	3(2)		3			
8.0	7	3(2),2(3)		4	3		
8.5	18	4(2),1(3)		14	4		
9.0	14	4(2),1(3)		11	3		
9.5	4	1(2),2(3)		1	3		
10.0	6	4(3),1(4)			5	1	
10.5	10	5(3)			10		
11.0	14	2(3),3(4)			6	8	
11.5	10	5(4)				10	
12.0*	7	1(3),2(4),1(5)			2	4	2
12.5	1	1(5)					1
Mean TL			4.0	8.7	10.1	11.5	12.5
SE			0.3	0.1	0.2	0.1	0.2

\*Due to an odd numbered sample size there is actually 1.75, 3.5, 1.75 fish represented for each age class.



Back-calculated lengths-at-age for walleyes captured at Simonton Lake, Elkhart County, Indiana in June 2007.

Year Class	# Aged	Age			
		1	2	3	4
2005	7	6.2	11.5		
	SD	0.4	0.4		
2004	9	5.7	10.5	13.2	
	SD	0.7	2.3	1.5	
2003	5	6.8	11.6	14.1	16.5
	SD	0.9	1.9	2.0	2.4
Mean*			11.2	13.7	16.5
SD			1.5	1.7	2.4

\*Does not include age groups with less than three samples.

Age-length key for walleyes captured at Simonton Lake, Elkhart County, Indiana in June 2007.

Length Group	# in sample	# (age) in subsample	Age			
			1	2	3	4
12.0	3	2(2)		3		
12.5	3	2(2),1(3)		2	1	
13.0	3	2(2),1(3)		2	1	
13.5	2	1(2),1(3)		1	1	
14.0						
14.5	4	2(3),2(4)			2	2
15.0	1	1(3)			1	
15.5	1	1(3)			1	
16.0	1	1(3)			1	
16.5						
17.0	1	1(3)			1	
17.5						
18.0						
18.5	1	1(4)				1
19.0	1	1(4)				1
19.5						
20.0						
20.5						
21.0	1	1(4)				1
Mean TL				12.8	14.9	17.8
SE				0.2	0.5	1.3

Back-calculated lengths-at-age for redear sunfish captured at Simonton Lake, Elkhart County, Indiana in June 2007.

Year Class	# Aged	Age				
		1	2	3	4	5
2005	14	2.1	5.1			
	SD	0.4	0.8			
2004	10	1.9	4.4	6.8		
	SD	0.3	1.1	1.3		
2003	3	1.8	4.7	7.3	8.1	
	SD	0.3	1.1	1.5	1.5	
2002	8	1.9	5.0	7.6	8.6	9.1
	SD	0.3	0.9	0.9	0.8	0.7
Mean*			4.8	7.2	8.4	9.1
SD			1.0	1.2	1.1	0.7

\*Does not include age groups with less than three samples.

Age-length key for redear sunfish captured at Simonton Lake, Elkhart County, Indiana in June 2007.

Length Group	# in sample	# (age) in subsample	Age				
			1	2	3	4	5
5.0	2	1(2),1(3)		1	1		
5.5	4	4(2)		4			
6.0	4	3(2),1(3)		3	1		
6.5	8	4(2)		8			
7.0	3	3		2	1		
7.5	5	3			3	2	
8.0	5	2(3),1(4)			4		1
8.5	1	1(3)			1		
9.0	3	1(3),1(4),1(5)			1	1	1
9.5	6	1(4),5(5)				1	5
10.0	1	1(5)					1
Mean TL				6.4	7.7	8.7	9.5
SE				0.1	0.3	0.5	0.2

Back-calculated lengths-at-age for yellow perch captured at Simonton Lake, Elkhart County, Indiana in June 2007.

Year Class	# Aged	Age				
		I	II	III	IV	V
2006	3	2.5				
	SD	0.4				
2005	12	2.5	5.0			
	SD	0.4	0.9			
2004	5	2.6	5.1	7.2		
	SD	0.5	0.7	0.5		
2003	1	2.2	5.0	7.4	8.1	
	SD					
2002	2	2.0	3.6	6.1	7.7	8.8
	SD	0.0	0.5	1.5	1.2	0.6
Mean*		2.5	5.1	7.2		
SD		0.4	0.8	0.5		

\*Does not include age groups with less than three samples.

Age-length key for yellow perch captured at Simonton Lake, Elkhart County, Indiana in June 2007.

Length Group	# in sample	# (age) in subsample	Age				
			1	2	3	4	5
2.5	1	1(1)	1				
3.0							
3.5	1	1(1)	1				
4.0	2	1(1),1(2)	1	1			
4.5							
5.0							
5.5							
6.0	4	4(2)		4			
6.5	3	3(2)		3			
7.0	4	3(2),1(3)		3	1		
7.5	2	1(2),1(3)		1	1		
8.0	3	2(3)			3		
8.5	2	1(3),1(4)			1	1	
9.0	1	1(5)					1
9.5	1	1(5)					1
Mean TL			3.6	6.6	8.1	8.8	9.5
SE			0.4	0.3	0.2	-	0.3

Locations of gill net and trap net sets on Simonton Lake, 2007  
(Koza 2006).

Gill Nets				
1	N	41.75356	W	85.96695
2	N	41.74771	W	85.97129
3	N	41.74944	W	85.96973
4	N	41.74773	W	85.96642
5	N	41.74854	W	85.96584
6	N	41.74850	W	85.96891
7	N	41.75209	W	85.95033
8	N	41.75250	W	85.95054

  

Trap Nets				
1	N	41.74989	W	85.94859
2	N	41.75318	W	85.95153
3	N	41.74949	W	85.95509